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L2 same 10

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<u>L3</u>	L2 same 10	5	<u>L3</u>
<u>L2</u>	L1 same diameter	20	<u>L2</u>
<u>L1</u>	microarray same micron	40	<u>L1</u>

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=> s microarray (p)micron  
L1 11 MICROARRAY (P) MICRON

=> s 11 (p)diameter  
L2 0 L1 (P) DIAMETER

=> s 11 (p)ten  
L3 0 L1 (P) TEN

=> s 11 (p)10  
L4 3 L1 (P) 10

=> duplicate remove 14  
PROCESSING COMPLETED FOR L4  
L5 3 DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)

=> d bib ab 15 1-3

L5 ANSWER 1 OF 3 MEDLINE on STN  
AN 2001445849 MEDLINE  
DN 21374421 PubMed ID: 11481467  
TI DNA microarray reveals changes in gene expression of shear stressed human umbilical vein endothelial cells.  
AU McCormick S M; Eskin S G; McIntire L V; Teng C L; Lu C M; Russell C G; Chittur K K  
CS Department of Bioengineering, University of Illinois, Chicago, IL 60607, USA.  
NC HL18672 (NHLBI)  
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2001 Jul 31) 98 (16) 8955-60.  
Journal code: 7505876. ISSN: 0027-8424.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals; Space Life Sciences  
EM 200108  
ED Entered STN: 20010813  
Last Updated on STN: 20010903  
Entered Medline: 20010830  
AB Using DNA **microarray** screening (GeneFilter 211, Research Genetics, Huntsville, AL) of mRNA from primary human umbilical vein endothelial cells (HUVEC), we identified 52 genes with significantly altered expression under shear stress [25 dynes/cm<sup>2</sup>] for 6 or 24 h (1 dyne = 10 **micro**N), compared with matched stationary controls; including several genes not heretofore recognized to be shear stress responsive. We examined mRNA expression of nine genes by Northern blot analysis, which confirmed the results obtained on DNA microarrays. Thirty-two genes were up-regulated (by more than 2-fold), the most enhanced being cytochromes P450 1A1 and 1B1, zinc finger protein EZF/GKLF, glucocorticoid-induced leucine zipper protein, argininosuccinate synthase,

and human prostaglandin transporter. Most dramatically decreased (by more than 2-fold) were connective tissue growth factor, endothelin-1, monocyte chemotactic protein-1, and spermidine/spermine N1-acetyltransferase. The changes observed suggest several potential mechanisms for increased NO production under shear stress in endothelial cells.

- L5 ANSWER 2 OF 3 MEDLINE on STN  
AN 2001355750 MEDLINE  
DN 21237280 PubMed ID: 11338608  
TI On-demand droplet spotter for preparing pico- to femtoliter droplets on surfaces.  
AU Yogi O; Kawakami T; Yamauchi M; Ye J Y; Ishikawa M  
CS Joint Research Center for Atom Technology (JRCAT), Angstrom Technology Partnership (ATP), 1-1-4 Higashi, Tsukuba, Ibaraki 305-0046, Japan.  
SO ANALYTICAL CHEMISTRY, (2001 Apr 15) 73 (8) 1896-902.  
Journal code: 0370536. ISSN: 0003-2700.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
EM 200106  
ED Entered STN: 20010625  
Last Updated on STN: 20010625  
Entered Medline: 20010621  
AB A droplet spotter for on-demand generation of pico- to femtoliter droplets was developed to meet the requirement for high-density spotting of chemicals on a surface. Our droplet spotter involves applying a approximately 1000-V and approximately 10-ms pulse voltage to the tip of a capillary tube (o.d. approximately 18 microns; i.d. approximately 11 microns) supplied with water or a dye solution. The capability of the spotter was demonstrated by preparing a microarray of dye molecules. The microarray was prepared by spotting approximately 30-fL droplets of a dye solution on a surface at the density of one spot per 20 x 20 micron 2.
- L5 ANSWER 3 OF 3 MEDLINE on STN  
AN 2001124795 MEDLINE  
DN 21041235 PubMed ID: 11197481  
TI Surface immobilized biochemical macromolecules studied by scanning Kelvin microprobe.  
AU Cheran L E; McGovern M E; Thompson M  
CS Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, Ontario, Canada M5S 3H6.  
SO FARADAY DISCUSSIONS, (2000) (116) 23-34; discussion 67-75.  
Journal code: 9212301. ISSN: 1359-6640.  
CY England: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200102  
ED Entered STN: 20010322  
Last Updated on STN: 20010322  
Entered Medline: 20010222  
AB The measurement of work function is a particularly effective method for the characterization of surfaces because of the sensitivity of the parameter to interfacial structure, modification and overall chemistry. Accordingly, techniques for the analysis of work function offer a powerful tool for monitoring surface chemical changes, especially for situations involving the immobilization of new moieties at the interface. In the present paper, we describe the performance of a new, modified scanning Kelvin microprobe which is capable of the tandem measurement of contact potential and surface topography with resolutions of 1 mV and 10 nm, respectively. The lateral resolution is 1 micron. The instrument has been applied to the study of substrates modified by the

attachment of biochemical macromolecules such as oligonucleotides and DNA. This preliminary work confirms the great potential of the technique in the study of biocompatibility, macromolecular structure and **microarray** devices.

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(FILE 'HOME' ENTERED AT 14:48:12 ON 16 DEC 2003)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 14:48:30 ON 16 DEC 2003

L1            11 S MICROARRAY (P)MICRON  
L2            0 S L1 (P)DIAMETER  
L3            0 S L1 (P)TEN  
L4            3 S L1 (P)10  
L5            3 DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)

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